Activity 3  
Center of Mass

Goals…

* **Locate the center of mass of oddly shaped 2-dimensional objects.**
* **Infer the location of the center of mass of symmetrical 3-dimensional objects.**
* **Measure the approximate location of the center of mass of your body.**
* **Understand that the entire mass of an object may be thought of as being at the object’s center of mass.**

For You To Read Key Points To Learn

* Center of Mass - the ­­­­­­­­­­­­­Click here to enter text. at which Click here to enter text. the mass of an object is considered to be concentrated for calculations concerning Click here to enter text. of the object

Activity 4  
Defy Gravity

Goals

* **Measure changes in height of the body’s center of mass during a vertical jump.**
* **Calculate changes in the gravitational potential energy of the body’s center of mass during a vertical jump.**
* **Understand and apply the definition of work, Work = *fd***
* **Recognize that work is equivalent to energy.**
* **Understand and apply the joule as a unit of work and energy**
* **Apply conservation of work and energy to analysis of a vertical jump**

For You To Read Key Points To Learn

* Work = the product of the Click here to enter text. and the Click here to enter text. in the Click here to enter text. of the displacement
* Potential Energy = energy that is dependent on the Click here to enter text. of the object
* Kinetic Energy = the energy an object possesses because of its Click here to enter text.
* Conservation of Energy = in a Click here to enter text. system theClick here to enter text.of all the energies at any one time must Click here to enter text. the total of all the energies at Click here to enter text.time.
* Work = Click here to enter text.
* PEgravitational = Click here to enter text. = \_Click here to enter text.
* KE = Click here to enter text.